UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

SLOAN VALVE COMPANY, a Delaware corporation, Plaintiff, v. ZURN INDUSTRIES, INC., et al. a Delaware corporation,	))))))))	Case No. 1:10-cv-00204 Judge: Hon. Amy J. St. Eve Magistrate Judge: Hon. Sidney I. Schenkier

PLAINTIFF'S POST-*DAUBERT* HEARING SUBMISSION
<u>REGARDING RICHARD BERO</u>

Mr. Bero employed legally acceptable and analytically sound valuation and accounting methodology in both his reports and his testimony at the *Daubert* hearing, and relied on previously disclosed and reliable evidence to support each aspect of Sloan's damages consistent with the holding in *Georgia Pacific*. His opinions should stand in their entirety.[1]

I. Bero Properly Bases His Reasonable Royalty Calculations on the Expectations of the Parties at the Time of the Hypothetical Negotiation.

Consistent with the case law discussed below and with patent damages valuation principles he and other experts have applied in dozens of cases of which Bero is aware, Bero bases his reasonable royalty calculations on the parties' expectations at the time of the July 2006 hypothetical negotiation. Bero's report was replete with references to Sloan's expectations in 2006, including its expectation that by licensing to Zurn, Sloan would be harmed by the loss of its ability to charge the higher prices it had planned to charge. (Ex. A, Opening Expert Report of

[1] Sloan will address several issues below, and relies on its prior briefs and the *Daubert* hearing testimony and exhibits as to the remaining issues.

Richard F. Bero ("Bero Rpt.") at 46-50.) Bero's reasonable royalty testimony likewise referenced the parties' expectations. (Ex. B, Bero *Daubert* Tr. ("Hr'g Tr.") at 62-70.)

There is ample evidence to support Bero's opinions as to – and for the jury to itself determine – the amount of harm that, in 2006, Sloan reasonably expected to suffer from Zurn's competition if it licensed to Zurn – and specifically that Sloan reasonably expected that without competition from Zurn, Sloan would have sold the same number of MDFVs ultimately sold by Sloan and Zurn at the higher prices Sloan had planned to charge.

- Three senior executives from Sloan – including the current CEO, Jim Allen, who, in 2005, developed both Sloan's sales volume projections (which were the basis for Sloan's business decision to invest in developing the patented product) and Sloan's proposed selling prices (which serve as the basis for Mr. Bero's calculations) – will testify to the facts (not opinions) that Sloan knew that Zurn would undercut Sloan's prices on MDFVs and that Sloan expected to be able to sell just as many units as the two parties combined actually sold at the higher price Sloan had intended to charge as reflected in Mr. Allen's May 2005 memo. (*See* Ex. C, SVC0331059; Ex. E, SVC0331058 and Ex. A, Bero Rpt. pp. 17-20.) This testimony alone provides ample basis for Bero's testimony as to Sloan's expectations, which expectations provide part of the basis for his reasonable royalty opinion. As this Court noted in permitting these seasoned executives to testify on this point, "As with Aykroyd and Allen, [Madison] may testify regarding what Sloan hoped to charge its customers for its MDF valve." (Dkt. 719 p. 12.)

- Two of the Sloan executives who will testify as to their expectations, Jim Allen and Bill Madison, worked in the business of selling flush valve for many years by 2006, and their positions prior to and in 2006 immersed them in communicating with customers about the prices and benefits of flush valves. (Dkt. 696, Sloan's Response to Zurn's *Daubert* Motion to Exclude Sloan Employees Regarding Price Erosion Damages pp. 4-7, 9-10.)

- Sloan, the largest maker of flushometer valves in the United States, made the business decision to invest significant time and money in developing this product on the basis of Jim Allen's expectations. (Ex. D, Jim Allen April 30, 2013 Dep. Tr. ("Allen Dep. Tr.") pp. 60-63; Ex. B, Hr'g Tr. pp. 32-33.)

- Jim Allen's memo proposing the development of this product reflected Sloan's expectation that it would sell 41,000 units in the first three years – about 10% more than the 36,000 units Sloan and Zurn actually sold, combined, in those years – at prices higher than Sloan was eventually able to charge due to Zurn's

infringing competition. (Ex. E, SVC0331058.) The remainder of the Sloan management team approved the development effort based on those volume expectations. (*Id.*)[2]

- Customers desiring the water savings made possible by the patented invention had no acceptable non-infringing alternatives at the time of the hypothetical negotiation. (Ex. B, Hr'g Tr. p. 42.) The AMTC and Coyne & Delaney dual flush valves were not on the market at the time, and in any event, they never performed in an acceptable manner. (Ex. A, Bero Rpt. pp. 35-36; Ex. D Allen Dep. Tr. p. 149-154; Ex. I John Wilson May 2, 2013 Dep. Tr. 64-69; Ex. B Hr'g Tr. pp. 35-36, 45-47.) The electronic, automatic dual flush products were not on the market in 2006, either, and even when they did become available, they were priced at a premium hundreds of dollars higher than the MDFV (Ex. A, Bero Rpt. p. 37; Ex. B, Hr'g Tr. pp. 48-49). The single flush valve did not offer the water savings, and so did not include the driver of customer demand for the MDFV. (Ex. ,F Rebuttal Expert Report of Richard F. Bero dated April 5, 2013 ("Bero Rebuttal Rpt.") p. 24; Ex. B, Hr'g Tr. pp. 49-50.)[3] The 1.28 gpf valves also were not accepted even for new construction until far later – defendants claim they were acceptable by consumers in 2008; Sloan witnesses claim they became acceptable even later; and sales did not increase until 2010. (Ex. A, Bero Rpt. p. 38; Ex. B, Hr'g Tr. pp. 44, 47, 181.)

- The $[redacted] premium Sloan planned to charge for the MDFV over the manual single flush valve was a fraction of the premium customers willingly paid for other water-saving plumbing products. Customers willingly paid a [redacted] premium for the automatic dual flush over the automatic single flush; Jim Allen testified that customers willingly paid a $[redacted] to $[redacted] premium for water free urinals. (Ex. A, Bero Rpt. p. 18; Ex. C, SVC0331059; Ex. F, Bero Rebuttal Report p. 21-22; Ex. D, Allen Dep. Tr. p. 76-77; Ex. B, Hr'g Tr. pp. 99-100.)

- Finally, the premium Sloan expected to charge for the MDFV was a tiny fraction of the cost savings those products would generate for their purchasers. The payback information contained in the publication describing the Purdue installation (payback of the entire cost of the handle -- $[redacted], at the time -- "in less than a year") (Ex. A, Bero Report p. 14 fn. 51; Ex. B, Hr'g Tr. p. 102-03) and in the Ballanco report (payback of the premium over single flush valves from water savings in less than three years) (Ex. G, Expert Report of Julius Ballanco dated January 28, 2013 p. 45-46; Ex. B, Hr'g Tr. p. 104-105) shows that any reasonable business person knowledgeable about water savings (namely, the customers

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[2] Though Zurn tried to get Bero to testify that he did not consider Jim Allen's January 2005 memo when he rendered his opinion, the memo was an exhibit as Jim Allen's 2010 deposition, which was disclosed (with exhibits) as evidence that Bero relied upon. (Ex. B, Hr'g Tr. pp. 197-98, 245-46.)

[3] As a matter of law, none of these was an acceptable non-infringing alternative. *Kaufman Co., Inc. v. Lantech, Inc.*, 926 F.2d 1136, 1142 (Fed. Cir. 1991) ("To be deemed acceptable, the alleged acceptable noninfringing substitute must not have a disparately higher price than or possess characteristics significantly different from the patented product.")

> interested in purchasing MDFVs) would have paid the premium Sloan intended to charge. Jim Allen testified that pricing that allows a payback of three years or less makes investments attractive to building owners. (Ex. D, Allen Dep. Tr. p. 78-81)

The Court has expressed some concern as to whether Bero's sufficiently referenced the Purdue publication in his initial expert report. Bero's patent damages valuations included consideration of the basis for customer demand and the technology's contribution to the market. (Ex. A, Bero Rpt at 13-21; Ex. H, Water Savings Articles; Ex. B, Hr'g Tr. pp. 23-25.) Consistent with his practice (based on experience and training), Bero began his analysis with an "overview of Sloan's Uppercut." (Ex. A, Bero Rpt. at 13-21; Ex. B, Hr'g Tr. pp. 23-25; Ex. H, Water Savings Articles.) In this analysis and evaluation Bero highlighted articles (including the Purdue article) that described the water savings that a MDFV customer could expect to save during the "payback period," *i.e.*, the time it takes for a consumer to recover the cost of product purchase. (Ex. A, Bero Rpt. at 14; Ex. H, Water Savings Articles.) This consideration (along with many other considerations disclosed in Bero's reports) underlie his reasonable royalty analysis. Zurn demonstrated its awareness of these articles at the *Daubert* hearing; having admitted that it scoured the support for Bero's opinions (Ex. B, Hr'g Tr. p. 103), Zurn cannot claim it had no notice that Bero relied upon these articles in rendering his opinion. The purpose of Fed. R. Civ. R. 26(a)(2) is to provide notice; Bero and Sloan have satisfied that requirement here. Where an opposing party has notice of materials relied upon by expert, it is too severe a sanction to exclude the expert's testimony. *Fidelity Nat'l Title Ins. Co. of N.Y. v. Intercounty Nat'l Title Ins. Co*., 412 F.3d 745, 751-53 (7th Cir. 2005).[4]

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[4]. *See also Gicla v. U.S.*, 572 F.3d 407, 411-12 (7th Cir. 2009) ("Although [the expert] did suggest that seeing the x-rays enabled him to 'expand upon his testimony,' the court found… that [the expert's] testimony on direct examination differed in no respect from the opinions disclosed prior to trial… At most, it appears that [the expert's] review of the x-rays simply confirmed what he had already concluded.") Moreover, "trials serve a truth-seeking function, and if the [expert's] opinions were not altered by his review of the x-rays, then the factfinder was entitled to know that." *Id*. at 412.

Even if the Court were to rule that Bero himself can rely on only some, but not all, of the above facts in support of his opinion that Sloan's expectations were "reasonable" (because the Court has indicated it might conclude his report did not sufficiently tie that opinion to some of the facts set forth above), all of the above factual evidence will still be in evidence at trial, and it still will be well within the province of the jury to consider the evidence and determine that Sloan's expectations were reasonable when it negotiated a reasonable royalty in 2006. Therefore, Bero should at least be permitted to present his reasonable royalty calculations in his reports to the jury in response to questions such as, "If the jury were to conclude based on the factual testimony of the Sloan executives that Sloan's expectations of the injuries it would sustain if it licensed Zurn were reasonable, have you calculated the reasonable royalty that would result?"

II. *Crystal Semiconductor* Has No Applicability to the Reasonable Royalty Portion of Bero's Testimony.

Under *Georgia Pacific*, the determination of a reasonable royalty depends on "what Plaintiff's and Defendants' expectations would have been," (Seventh Circuit Civil Jury Instruction 11.4.4) and not on the exact amount of the ultimate actual harm the infringer causes to the plaintiff. In contrast, proof of lost profits requires evidence of what the plaintiff's actual profits would have been "but for" the defendant's infringement. *See, e.g.*, Seventh Circuit Civil Jury Instruction 11.4.3. Bero applied a reasonable royalty analysis pursuant to *Georgia Pacific*, based on the parties' expectations at the time of the hypothetical negotiation in July 2006. (Notably, Zurn's expert, Ivan Hofmann, applied the same analysis.) (Ex. B, Hr'g Tr. p. 25-26.)

The appeal in *Crystal Semiconductor* dealt only with an award of lost profits, not with a reasonable royalty award, and therefore is not relevant to Bero's reasonable royalty opinion. In *Crystal Semiconductor*, the jury had awarded lost profits – including some based on price erosion -- and a separate award for reasonable royalty damages. *Crystal Semiconductor Corp. v.*

Trtech Microelectronics Int'l, Inc., 246 F.3d 1336, 1342-43 (Fed. Cir. 2001). The District Court set aside the lost profits award, but entered judgment on the jury's award of reasonable royalty (doubled, for willfulness). *Id*. The appeal was as to the District Court's decision on the lost profits; the reasonable royalty award was not the subject of the appeal. *Id*. *Crystal Semiconductor* does not overrule the long line of cases holding that a reasonable royalty should be based on a party's expectations, not on proof of actual amount the plaintiff eventually lost.

The Federal Circuit consistently has stated that reasonable royalty awards are properly based on a party's expectations at the time of the hypothetical negotiation; whether those expectations actually came to pass is not controlling – indeed, it may be "irrelevant" -- to the reasonable royalty award. *See Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371 (Fed. Cir. 2001); *Snellman v. Ricoh Co.*, 862 F.2d 283 (Fed. Cir. 1988). In *Interactive*, Interactive's damages expert proposed a lump sum royalty based on an expected volume of future sales in one party's business plan. 274 F.3d at 1384. The jury based its award on that evidence; the defendant challenged the award because its actual sales came in far below those expectations. *Id*. The Federal Circuit rejected this attack, noting: "the negotiation must be hypothesized as of the time infringement began" and therefore "the fact that [defendant] did not subsequently meet those projections is irrelevant to [defendant's] state of mind at the time of the hypothetical negotiation." *Id*. at 1385. Similarly, in *Snellman*, the District Court set aside a reasonable royalty verdict based on a sales projection of 40,000-50,000 units because the defendant's actual sales came in far lower than the expected sales. 862 F.2d at 289. The Federal Circuit vacated, reinstating the jury's award, holding: "In determining a reasonable royalty, the jury considered evidence that Ricoh expected and intended to manufacture and distribute 40,000 to 50,000 infringing machines in the United States. This… document projecting Ricoh's

anticipated sales and expert testimony relating to those calculations, was relevant and proper in determining a reasonable royalty. Ricoh did not object to an instruction that directed the jury to calculate damages 'based upon or measured by the expectations of the parties at the time of the infringement.' The jury justifiably could have calculated a lump sum royalty based on Ricoh's expected sales.…" *Id*. In short, "Under *Georgia-Pacific*, a court determining the terms to which a willing buyer and seller would agree can consider… the anticipated amount of profits that the prospective licensor reasonably thinks he would lose as a result of licensing the patent as compared to the anticipated royalty income …. Under this approach, the reasonable royalty rate does not reflect the infringer's actual profits, but rather the parties' expectations and bargaining positions at the time of the first infringement." *Micro Motion, Inc. v. Exac Corp.*, 761 F. Supp. 1420, 1434 (N.D. Cal. 1991), citing *State Industries, Inc. v. Mor-Flo Industries, Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989).

This important distinction between expected and actual injuries has been specifically applied to distinguish between anticipated price effect and actual price erosion lost profits. In *Telemac v. US/Intelicom, Inc.*, 185 F.Supp.2d 1084 (N.D. Cal. 2001), the District Court found insufficient evidence to allow it to award lost profits damages for price erosion, but it then awarded the plaintiff a reasonable royalty that took into account that, in licensing a direct competitor, the plaintiff would have expected to experience harm because of price competition:

> "It is particularly relevant to the Georgia-Pacific analysis that Telemac would not have willingly licensed a direct competitor such as USI and, if forced to do so, would only have licensed USI at the highest possible royalty rate it could obtain…. In effect, in order to license a direct competitor, Telemac would have required significantly higher royalty rates to compensate it for the risks of quality, fraud and general price erosion caused by USI. [citing to the testimony of one of Telemac's damages experts]. This fact weighs in favor of applying a higher reasonable royalty rate…." *Id*. at 1101-02.

III. Zurn's "Entire Market Value Rule" Argument Is Wrong Both Factually and As a Matter of law.

Zurn's Entire Market Value Rule (EMVR) argument is contrary to both the facts and to common sense. Zurn argues that the EMVR means that the jury can take only the $[redacted] price premium between a MDFV and a single flush valve into account for reasonable royalty purposes. (Dkt. 629, Zurn Reply Br. pp. 5-8.) But the facts show that because there were no acceptable noninfringing alternatives in 2006, as the licensor in the hypothetical negotiation Sloan would have understood that every time Zurn sold a MDFV, Sloan would lose a sale of a MDFV, and that each such lost sale would cost Sloan $[redacted], not just $[redacted]. (*See supra* p. 3; Ex. B, pp. 42, 78-79, 93.) It defies logic and common sense to contend that a reasonable licensor in Sloan's position would not have taken that entire $[redacted] per valve loss into account in negotiating the royalty rate.

It also flies in the face of the law. "Under *Georgia-Pacific*, a court determining the terms to which a willing buyer and seller would agree can consider… the anticipated amount of profits that the prospective licensor reasonably thinks he would lose as a result of licensing the patent…" *Micro Motion, supra*. The EMVR has no applicability when, as here, the expert calculates not a royalty on the *value* of the defendants' revenues, but a *per unit* royalty. As noted in Sloan's Response Brief, *Lucent Techs., Inc. v Microsoft Corp*., No. 07-CV-2000 H, 2011 U.S. Dist. LEXIS75504 (S.D. Cal. July 13, 2011) does not support Zurn's position, as the subsequent decision by the same judge makes clear: "[plaintiff's expert's] per unit royalty does not rely on the entire market value of Defendants' accused products, and the entire market value rule does not apply." (Dkt. 613, Sloan Opp. to Bero *Daubert* Mot. at 2-3.) Zurn's attempt in its reply to characterize the holding in *Ericsson, Inc. v. D-Link Corp.,* No. 6:10-CV-475, 2013 U.S. Dist. LEXIS 71564 (E.D. Tex. May 21, 2013), as supporting its position is unavailing. The *Ericsson* court was clear and unequivocal: "Bone's analysis calls for a per unit royalty on all sales of

accused products… As a per unit royalty, it does not fluctuate with the price of the end product. Regardless of the ultimate sale price of the end product, the royalty rate remains constant. This further illustrates that Mr. Bone does not rely on the value of end products in his analysis. *See SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1383 (Fed. Cir. 2013) (determining that a plaintiff did not invoke the entire market value rule when it 'never sought to justify its damages figure based on the price of the customer end products')." *Id*.

The EMVR also has no applicability to collateral sales. Zurn has cited only a single District Court case for the proposition that, to be factored into the royalty *rate* calculation, collateral sales must function together with the patented invention as a "single functioning unit." (Dkt. 642, Zurn Reply p. 8.) The cited case does not support that contention; it relates only to when collateral sales can be included in the royalty *base*, not whether the consideration of collateral sales can upwardly affect the royalty *rate* on a royalty base that is limited to the infringing products. *Cornell Univ. v. Hewlett-Packard Co.*, 609 F. Supp. 2d 279, 286-87 (N.D.N.Y. 2009) *amended*, 01-CV-1974, 2009 WL 1405208 (N.D.N.Y. May 15, 2009). Zurn's argument flies in the face of the Federal Circuit's *en banc* decision in *Rite Hite* and numerous other cases (see Sloan's Opposition Brief, Dkt. 618 pp. 20-21), which establish, in the words of the Seventh Circuit Civil Jury Instruction: "the existence of such convoyed sales may be taken into account in setting a reasonable royalty rate, whether or not any functional relationship exists between the two." Seventh Circuit Civil Jury Instruction 11.4.3.4; *Rite-Hite v. Kelly Co.*, 56 F.3d 1538, 1554-55 (Fed. Cir. 1995).

IV. Bero Should Also Be Permitted to Testify as to Sloan's Lost Profits from Price Erosion from 2010 to Date.

Turning to Sloan's claim for lost profits, which is limited to the period 2010 to date, Zurn relies on "Econ 101" demand curves, divorced from the facts of this case, to cast doubt as to

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whether customers would actually have purchased as many MDFVs at the $[redacted] premium Sloan planned to charge as they did at the roughly $[redacted]-$[redacted] premium Sloan and Zurn actually charged.

In fact, sound economic analysis, as applied to the evidence of this case, provides ample support for Bero's calculations. "The assumption of maximizing behavior lies at the heart of economic analysis…. To determine the quantity of any activity that will maximize its net benefit, we apply the marginal decision rule: If the marginal benefit of an additional unit of an activity exceeds the marginal cost, the quantity of the activity should be increased." http://www.saylor.org/site/wp-content/uploads/2012/06/ECON101-3.1.pdf.

The Purdue publication shows that customers could expect to save over $[redacted] each year by purchasing a MDFV instead of a single flush valve. Over the 20, 30 or more year life expectancy of a MDFV, those savings would amount to over $1000. (Ex. B, Hr'g Tr. p. 129-30.) Zurn is asking the court to rule that it is irrefutable that despite the absence of acceptable noninfringing alternatives to MDFVs for renovation projects (Ex. B, Hr'g Tr. p. 135-37), some customers would have refused to pay a $[redacted] premium to obtain $1000 or more in costs savings. In so doing, it is Zurn, not Sloan, that is asking the court to ignore the fundamental premise of all economic theory – that consumers will act rationally in their own economic interests. No rational consumer, knowing the cost saving benefits of a MDFV and being aware of their benefits (or they would not have paid even the $[redacted] premium over single flush,(Ex. B, Hr'g Tr. 76, 102-03)) would have refused to pay $[redacted] to get $1000 in return. Zurn will be free to argue this point to the jury, but the law does not require the Court, Mr. Bero or the jury to "check [its] common sense at the door." *Gil v. Reed*, 535 F.3d 551, 556 (7th Cir. 2008).

Dated: March 17, 2014

Respectfully submitted,

/s/ Daniel W. Werly

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CERTIFICATE OF SERVICE

I, Daniel W. Werly, an attorney, hereby certify that on March 17, 2014, I caused to be filed electronically PLAINTIFF'S POST-DAUBERT HEARING SUBMISSION REGARDING RICHARD BERO with the Clerk of the Court using the CM/ECF system, which will send an electronic copy of the foregoing to counsel of record and constitutes service under Federal Rule of Civil Procedure 5(b)(2)(D) pursuant to Local Rule 5.9 of the Northern District of Illinois.

/s/ Daniel W. Werly